

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (CURRENTLY AMENDED) ~~An~~ A refrigerant refill amount calculating apparatus comprising:
  - a concentration measuring unit which measures component ratios of a mixed refrigerant contained in a refrigerating machine; and
  - a calculation processing unit which calculates refill amounts of respective refrigerant components which are required to fill a mixed refrigerant having a defined amount in defined component ratios into the refrigerating machine based upon an amount of a refrigerant component which has been additionally filled into the refrigerating machine, and also, a change amount of component ratios which have been measured before and after the refrigerant component was filled.
2. (ORIGINAL) A refrigerant refill amount calculating apparatus as claimed in claim 1, further comprising:
  - an output unit for instructing the refill amounts of the refrigerant components calculated in said calculation processing unit.
3. (ORIGINAL) A refrigerant refill amount calculating apparatus as claimed in claim 1, wherein said concentration measuring unit includes:
  - a measuring cell into which the mixed refrigerant is conducted;
  - an infrared light source irradiating infrared rays to said measuring cell; and

a detecting unit detecting infrared rays which has passed through said measuring cell.

4. (CURRENTLY AMENDED) ~~An~~ A refrigerant refill amount calculating method comprising the steps of:

measuring refrigerant component ratios of a mixed refrigerant, having a plurality of refrigerant components, filled into a refrigerating machine, wherein said measurement is based upon an amount of at least one of said refrigerant components which has been filled into the refrigerating machine and a change amount of said component ratios, wherein said change amount of said component ratios is calculated based on a measurement of said component ratios prior to and after said at least one refrigerant component has been filled;

refilling ~~aan small~~ amount of said refrigerant components;

measuring again the refrigerant component ratios of ~~a-said~~ mixed refrigerant; and

calculating ~~a-refill~~ amounts of ~~respective-said~~ refrigerant components which is required to fill said refrigerating machine so that said a-mixed refrigerant having-has a-defined amount in defined refrigerant component ratios into-said refrigerating machine.

5. (CURRENTLY AMENDED) ~~An~~ A refrigerant refill amount calculating method as claimed in claim 4 wherein infrared rays are caused to pass through said mixed refrigerant, and then, penetrated infrared rays are detected so as to obtain the refrigerant component ratios of said mixed refrigerant.